



PHOTOGRAPHY FAQ

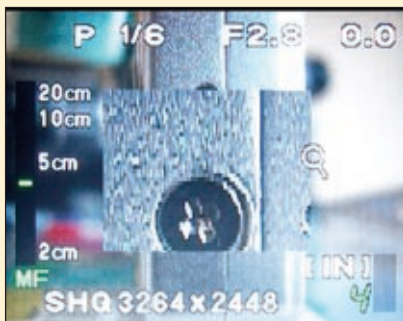
Q Can you tell me why manual focus is so rare on digital cameras?

A Most of the time people want the centre of their picture to be focused as sharply as possible, but this isn't always the case, and on SLR cameras (both the film and digital varieties) the ability to alter the focus manually is a major selling point. However, manual focus is tricky to implement on a compact camera because there's no easy way for the user to see whether or not a shot is in focus.

An SLR camera's viewfinder shows the view through the camera's lens, so changes to the focus are clearly visible. In a compact camera, the optical viewfinder isn't connected to the lens, and although the zoom setting can be replicated in the viewfinder, focus cannot. A digital camera's LCD screen shows the view through the lens and provides a preview of the lens's focus, but the problem here is with the screen's resolution. This is around 110,000 pixels, compared to CCD sensors' resolutions of between three and eight million pixels. As a result, each pixel on the LCD screen has to represent an area of around 8x8 pixels in the captured image, which leaves a lot of guesswork when you're trying to achieve a sharp focus.

While many compact digital cameras offer no manual focus at all, some include a workaround to this problem. A simple technique is to provide a distance readout in metres or feet, so you can make a decent stab at getting a sharp picture. Other cameras use digital zoom to show a close-up of the centre of the composition while you adjust the manual focus. By doing so, the screen can represent the centre of the image pixel-for-pixel. This makes accurate manual focus possible even if it still feels rather clumsy to use compared with an SLR's viewfinder. Pentax cameras have used this technique for many years, but Canon and Olympus have adopted it more recently, and the Olympus SP-350 (reviewed opposite) provides the most effective implementation we've seen.

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The Olympus SP-350 can show the centre of the image at high magnification, making individual pixels clearly visible to assist with manual focus adjustment

REVIEW DIGITAL CAMERA

SAMSUNG L55W

RATING ★★★★★

PRICE £204 inc VAT

SUPPLIER www.dabs.com

DETAILS www.samsungcamera.co.uk

The front of Samsung's L55W may look fairly unassuming, but at the back there's a wide-aspect screen that measures a whopping 2.8" from corner to corner. The CCD has a standard 4:3 aspect ratio, so although switching from widescreen to 4:3 makes the onscreen image smaller, the resulting photos are actually bigger as widescreen mode simply discards the top and bottom of the picture rather than adding extra pixels at the sides. Still, Samsung justifies the concept with a wide-angle lens that goes from 28-135mm (35mm equivalent), so the camera can capture a wider view than most compact cameras.

We're not sure whether widescreen is a huge benefit to still images, but for video it's perfect. The camera uses MPEG4 and AAC compression to capture 640x368-pixel video and superb-quality audio at around 16MB per minute. It's a shame the compression ratio can't be adjusted, as video compression artefacts were a bit too noticeable for our liking. Automatic exposure was smooth, but videos shot indoors tended to be a little dark.

In stills mode the camera was perplexing at first. Its settings are spread over three different menu systems, each of which is accessed through a different button. However, once we started to



remember where to find things, the camera was fast and easy to use. Image quality was consistently decent, displaying vibrant colours and pleasing skin tones. A manual white-balance mode helped to produce excellent indoor shots, although the long exposure times required a steady hand. Image noise was barely evident, and the extended zoom range and excellent macro mode helped capture plenty of detail.

The L55W is a fun camera rather than one for creative photographers. There's no full manual control but you can overlay cartoon masks over portraits. However, on these terms it succeeds, providing decent image quality and plenty of novel features, not least the huge widescreen LCD.

Ben Pitt



Fun widescreen concept; dependable image quality



Menu system is confusing at first

SPECIFICATIONS 5 megapixels (2,592x1,944 pixels), 4.8x optical zoom, 24MB internal memory, SD slot. **Part code** 8801089761521

HOTLIST DIGITAL CAMERA

CANON PowerShot S2 IS

RATING ★★★★★

PRICE £305 inc VAT

SUPPLIER www.savastore.com

DETAILS www.canon.com

Canon's PowerShot S2IS might weigh just over half a kilo, but it's incredibly comfortable to use. Its bright 12x zoom lens is mechanically stabilised, which helps the 5-megapixel sensor produce sharp, blur-free pictures, even when shooting at full zoom from your hand. It takes rich, warm stills, and records movies at 640x480 and 30fps. A stunning macro mode lets you focus on objects right up to the lens surface. If you want a camera that has a big zoom lens and plenty of shooting options, this is the one to buy.



SPECIFICATIONS 2,560x1,920 resolution, stabilised 12x zoom lens (36-432mm), 16MB SD card. **Part code** 9883A007AA

HOTLIST DIGITAL CAMERA

NIKON CoolPix 5600

RATING ★★★★★

PRICE £134 inc VAT

SUPPLIER www.currys.co.uk

DETAILS www.nikon.co.uk

Nikon's CoolPix 5600 is a low-cost, no-frills camera. The lack of manual settings will put off the amateur photographer, but the point-and-click crowd will love its ease of use and excellent image quality.

The 5-megapixel sensor captures photographs in fine detail and exemplary colours in a range of conditions. Quite a bargain.

SPECIFICATIONS 5 megapixels (2,592x1,944 pixels), 3x zoom lens, 14MB internal memory and SD slot. **Part code** VAA310EO





REVIEW DIGITAL CAMERA

OLYMPUS
SP-350

RATING ★★★★★

PRICE £243 inc VAT

SUPPLIER www.pcwb.comDETAILS www.olympus.co.uk

There are plenty of more exotic-looking cameras available on the market, but the SP-350's sleek black design should appeal both to gadget lovers and serious photographers. It's compact enough to put in a handbag or pocket but it remains extremely comfortable to hold. The accessory hotshoe and threaded lens ring show that this isn't just a point-and-click camera.

A 2.5" LCD screen dominates the back of the camera and, although its 115,000-pixel resolution is no higher than that of smaller screens, the extra size makes shooting and reviewing pictures more rewarding. An optical viewfinder is also included, although the view through it is pretty small. A basic set of physical controls belies its huge range of options and settings. Program, aperture priority, shutter priority and full manual controls are available, and histogram and exposure value (EV) readouts are there to help.

In full manual mode the brightness of the onscreen image reacts to shutter, aperture and ISO (but not flash) settings, and the same is true when using exposure compensation in the other modes. However, we thought it was odd that shutter and aperture settings are reflected on the screen immediately, but in order to see the effect of ISO



settings it's necessary to half-press the shutter release button.

Other options include exposure bracketing in three or five steps, auto exposure lock, selectable spot auto focus and manual focus with a zoomed centre portion of the screen that makes it easy to ensure shots are pixel-sharp. There are seven white balance presets and a manual mode that you set by pointing the camera at a white object, plus a huge range of scene presets. Unfortunately, most of these settings are available only through the menu system, which isn't particularly quick to navigate. It isn't as fast as we'd like between shots either, taking between three and four seconds, and browsing pictures stored in memory is really sluggish. We found the flash a bit confusing, as the current setting is shown onscreen for just a couple of seconds, and the symbols for 'flash on' and 'flash off but required' are very similar.

Olympus cameras often tend to undersaturate colours, but here they were spot on. The camera excelled at capturing detail both in bright and dark areas of high-contrast compositions. Skin tones were flattering yet natural, regardless of lighting, and even a handheld self-portrait with the flash looked great. Noise was barely evident except at the ISO 400 setting, and the Super Macro mode, manual focus and 8-megapixel sensor produced some stunning macro shots. The only cause for concern over image quality was some occasional blooming, which produced a halo-like glow around the edges of bright areas in photos.

As a point-and-shoot camera, the SP-350's lack of swiftness means there are better options, such as Casio's Exilim EX-S500, which we reviewed in *What's New, Shopper* January 2006. However, as an enthusiast's camera that's small enough to carry everywhere with you, it's the best example we've seen. Rechargeable batteries are not included and, as always, the supplied memory is hopelessly inadequate, but even so, the price is extremely competitive for such a versatile camera that performs so well.

Ben Pitt

✓ Superb image quality; extensive manual control; satisfying design

✗ Not particularly quick to use

SPECIFICATIONS 8 megapixels (3,264x2,448 pixels), 3x optical zoom, 25MB internal memory, xD-Picture Card slot. **Part code** 003753

HOTLIST SCANNER

MUSTEK
Be@rpaw 4800TA Pro II

RATING ★★★★★

PRICE £60 inc VAT

SUPPLIER www.dabs.comDETAILS www.mustek.co.uk

It may have been around for a while, but this scanner still offers the entry-level buyer above-average transparency results. It's easy to operate, with a simplified control panel for those who find the TWAIN interface too much. Scan quality isn't perfect, it's not as fast as many other scanners and there are no Mac drivers, but it's a great value all-rounder.

SPECIFICATIONS 2,400x4,800 optical resolution, 35mm, slide transparency adaptor, USB Hi-Speed interface. **Part code** 98-155-00010



HOTLIST DIGITAL CAMERA

NIKON
D50

RATING ★★★★★

PRICE £459 inc VAT

SUPPLIER www.currys.co.ukDETAILS www.nikon.co.uk

Nikon's D50 is the cheapest digital SLR camera we've reviewed. It offers great versatility and, like all SLRs, changeable lenses. The supplied lens is OK, but you'll probably want to upgrade it.

The D50 captures photos at a resolution of 3,008x2,000, and we found its shots to be rich and detailed and to exhibit a subtlety of colour that's not found in a compact camera. This camera is truly excellent value.

SPECIFICATIONS 3,008x2,000 resolution, 18-55mm lens (27-83mm 35mm equivalent), takes SD memory. **Part code** D50(UK) 18-55KIT SI

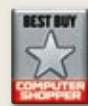


HOTLIST DIGITAL CAMERA

CANON
PowerShot A610

RATING ★★★★★

PRICE £185 inc VAT

SUPPLIER www.savastore.comDETAILS www.canon.co.uk

Canon's PowerShot A610 is fairly large, but it fits comfortably in your hand. Its picture quality is amazing, and it coped flawlessly with tricky lighting conditions such as high contrast and near darkness.

With its excellent video mode and manual focus, the A610 is better than many more expensive cameras.

SPECIFICATIONS 5 megapixels (2,592x1,944 pixels), 4x optical zoom, 32MB SD card. **Part code** 0322B007AA





REVIEW DIGITAL CAMERA

RICOH
Caplio RR530

RATING ★★☆☆

PRICE £105 inc VAT

SUPPLIER www.fotosense.co.ukDETAILS www.ricoh.co.uk

Ricoh's RR530 is the cheapest 5-megapixel camera we've seen. The lack of rechargeable batteries adds to the price, but the soft case is a welcome inclusion. The design is a little bland, but everything we'd expect is in place, including a 3x optical zoom, 1.8" LCD screen and optical viewfinder.

The controls are fairly basic, with just four scene modes and no direct control over shutter speed and aperture. ISO, metering, exposure compensation and white balance options are included, along with more unusual ones such as saturation and sharpness. However, it's disappointing that only the flash mode, self-timer and zoom have dedicated physical controls. It would have made sense for the up and down buttons to control exposure compensation when they're not busy with menu navigation.

Outdoor photography was impressive. Colours looked natural and detail was sharp, although image noise was evident in darker parts of pictures. Exposures were generally well balanced but a strong backlight confused the camera, even when using spot metering. Indoors, photos were less impressive.



The flash performed well at close range but even at two metres subjects began to look underexposed. Without the flash, pictures were generally dark and grainy, and the auto-focus often failed to lock on to the subject. Artificial light gave shots a nasty yellow tint, which didn't disappear completely when we switched to tungsten white balance mode.

At this price it's unfair to be too critical, and in many of our image tests the RR530 held its own against pricier cameras. However, spending £134 on Nikon's CoolPix 5600 (see Hotlist, page 34) will get you significantly better image quality.

Ben Pitt

✓ Low price

✗ Poor indoor photography

SPECIFICATIONS 5 megapixels (2,560x1,920 pixels), 3x optical zoom, 12MB internal memory, SD slot. **Part code** RR530

CHOOSING A...

DIGITAL
CAMERA

Follow our step-by-step guide to identify your ideal camera

1 A digital camera with the specifications in grey below will suit someone looking for a point-and-click camera that produces images that look decent when printed at 6x4". It has an LCD screen for previewing, reviewing and deleting shots and for changing settings. Such cameras cost around £100. Cheaper models are available, but their basic quality means they are best avoided.

2 An additional optical viewfinder allows you to take pictures when strong sunlight makes the LCD screen hard to see. You can also preserve batteries by switching the screen off.

3 The camera's top resolution depends on the size of its CCD sensor. A two-megapixel camera produces 1,600x1,200 photos, but with higher resolutions you can enlarge photos without making them blocky. Three megapixels is common, and you can get five or more without spending a bomb.

4 A digital zoom only guesses the extra detail required to zoom in on a subject. Far better is an optical zoom with a moving lens that enlarges the image as it hits the CCD. The lens should also have a quick and accurate auto-focus.

5 Serious photographers need manual control over focus, aperture, shutter speed and white balance and, ideally, plenty of buttons for quick access. Many cameras offer preset modes to improve results.

6 Consider hidden costs. Most cameras will require a memory card upgrade to at least 64MB if they are to hold more than a dozen pictures at a time. Some come with internal rechargeable batteries, making the camera compact, while some accept AA batteries, allowing you to carry spares.

FILL IN YOUR SPECS HERE

(Recommended minimum in grey)

RESOLUTION: 2,046x1,536 pixels

ZOOM: 3x optical

MONITORING: 1.8" colour LCD screen

SUPPLIED MEMORY: 16MB

BATTERIES: Disposable

REVIEW FLATBED SCANNER

HP
Scanjet 4850

RATING ★★☆☆

PRICE £86 inc VAT

SUPPLIER www.savastore.comDETAILS www.hp.co.uk

The Scanjet 4850's specification and price make it a strong candidate for general-purpose use in the home or office. It accepts A4 documents, six negatives or four slides at a time, and it's fast at low resolutions, producing previews in five seconds and A4 300dpi scans in just nine seconds. However, at higher resolutions it slows down considerably: scanning a 6x4" photo at 1,200dpi took six minutes, including a three-minute warm-up.

The TWAIN software for controlling the scanner looks neat and friendly but it's a pain to use. There's a descreen option for scanning magazines and newspapers, but nothing to indicate whether it's on or off. The software automatically closes and forgets all its settings between scans. As the settings are hidden behind various drop-down lists, capturing batches of images is extremely tedious.

Colour accuracy is up to scratch, and the 4850 captures natural tones from a wide range of media, including glossy photos, magazine pages, slides and negatives. Our only significant complaint is a slight red-purple tint to greyscales, although this wasn't evident in full-colour images. The 4,800x9,600dpi optical resolution

is a bit excessive, though, partly because a 9,600dpi A4 scan would result in a 25GB image, but mostly because the optics are precise enough to create pixel-sharp images at up to only 1,200dpi. Still, 1,200dpi is good enough to turn a 35mm negative into a 6x4" print at 300dpi, and we'd be happy to scan negatives at 2,400dpi and print them at 10x8" to put in a frame, where a small amount of softness in the image will probably go unnoticed.

Ultimately, the scan quality is decent for the price, but it's not good enough to compensate for the annoying software.

Ben Pitt

✓ Decent colour accuracy; fast at lower resolutions

✗ Irritating TWAIN software; blurry at high resolutions

SPECIFICATIONS 4,800x9,600dpi optical resolution, 48-bit colour depth, transparency adaptor, USB Hi-Speed interface.
Part code L1950A#B1P